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10/612,025	07/02/2003	Kevin T. Chan	14885US01	5831
23446 7590 06/04/2007 MCANDREWS HELD & MALLOY, LTD 500 WEST MADISON STREET SUITE 3400 CHICAGO, IL 60661			EXAMINER DAVENPORT, MON CHERI S	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

5

Office Action Summary	Application No. 10/612,025	Applicant(s) CHAN, KEVIN T.	
	Examiner Mon Cheri S. Davenport	Art Unit 2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) ✓ | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

This Office Action is in response to the amendment filed April 26, 2007.

Specification

Previous objection of specification is withdrawn in view of Applicant's amendment filed April 26, 2007.

Claim Rejections - 35 USC § 101

Previous rejection under 35 USC 101 is withdrawn in view of Applicant's amendment filed April 26, 2007.

Double Patenting

Previous nonstatutory double patenting rejection is withdrawn in view of Applicant's terminal disclaimer filed April 26, 2007.

Terminal Disclaimer

1. The terminal disclaimer filed on April 26, 2007 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of any patent granted on Application Number 10/612,729 reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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3. **Claims 1-30** rejected under 35 U.S.C. 102(b) as being anticipated by Bontemps et al. (US Patent Number 5,923,663)

Regarding **claim 1** Bontemps et al. discloses a method for providing and configuring secure communication links, the method comprising:

determining any one usable media pair from all existing media pairs of a first device;

selecting any one channel from all existing channels, said selected any one channel being different from a general channel assignment corresponding to said determined any one usable media pair; and

assigning said selected any one channel to said any one media pair(***see column 3, lines 58-62, A control circuit is provided that toggles the selected circuit between the first and second states until a link detect signal indicates the reception of communication signals. The control circuit holds the select circuit in the particular state in which valid communication signals were detected***).

Regarding **Claim 2**, Bontemps et al. discloses everything as claimed above (see claim 1). In addition, the method includes:

further comprising notifying a second device of said assigned any one channel which corresponds to said any one media pair (***see column 4, lines 5-6, a physical layer device within an external data device such as a DTE device(second device), continually transmit communication signals***).

Regarding **Claim 3**, Bontemps et al. discloses everything as claimed above (see claim 2). In addition, the method includes:

further comprising cross-connecting a corresponding channel and media pair for said second device, said cross-connected channel and media pair being equivalent to said selected any one channel assigned to said any one media pair(***see column 4, lines 7-11, the DTE (second device) device may include an internal crossover connection, or a crossover cable may be used for the communication link, so that the transmitted signals may be transmitted to either the first or second contacts sets of the port connector***) .

Regarding **Claim 4**, Bontemps et al. discloses everything as claimed above (see claim 1). In addition, the method includes:

further comprising negotiating said assignment of said selected any one channel to said any one media pair (***see column 4, lines 14-18, the toggle function of a media detection system according to the present invention periodically and continuously toggles the receive inputs of the local physical layer device between***

the contacts sets of the connector so that the communication signals are eventually detected).

Regarding **Claim 5**, Bontemps et al. discloses everything as claimed above (see claim 1). In addition, the method includes:

further comprising selecting from a plurality of predetermined channel and media pair assignments, a particular one of said channel and media pair assignment (***see column 3, lines 58-63, the control circuit is provided that toggles the select circuit between the first and second states until a link detect signal indicates reception of communication signals. The control circuit holds the select circuit in the particular state in which valid communication signals were detected).***

Regarding **Claim 6**, Bontemps et al. discloses everything as claimed above (see claim 1). In addition, the method includes:

further comprising:

designating a first combination of said channel assigned to said any one media pair as a communication channel and media pair; and

designating a second combination of said channel assigned to said any one media pair as a control channel and media pair (***see column 4, lines 62-65, the physical layer device to the appropriate contacts of the ports connector for performing a straight-through connection in one state (first combination) and a crossover connection in another state(second combination)***)

Regarding **Claim 7**, Bontemps et al. discloses everything as claimed above (see claim 6). In addition, the method includes:

further comprising securely transferring communication traffic via said communication channel and media pair(***see column 4, lines 5-7, the physical layer device within a external data device such as a DTE device, continually transmits communication signals, such as link or data pulses).***

Regarding **Claim 8**, Bontemps et al. discloses everything as claimed above (see claim 7). In addition, the method includes:

further comprising securely transferring control information via at least one of said communication channel and media pair(***see column 4, lines 5-7, the physical layer device within a external data device such as a DTE device, continually transmits communication signals, such as link or data pulses).***

Regarding **Claim 9**, Bontemps et al. discloses everything as claimed above (see claim 8). In addition, the method includes:

further comprising:

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monitoring at least one of said communication channel and media pair by a second device ; and

determining said selected any one channel assigned to said any one media pair(***see column 5, lines 31-36, physical layer device (second device), monitoring for communication signals in each of the first and second states of the select logic until valid communication signals are detected, and holding the select logic in one of the first and second states in which a link detect signal indicates detection of valid communication signals***).

Regarding **Claim 10**, Bontemps et al. discloses everything as claimed above (see claim 9). In addition, the method includes:

wherein said control information is at least one of authentication information, encryption information, channel setup information and link provisioning and link maintenance information(***see column 4, lines 21-34, the frequency of the toggling function depends upon the particular protocol and the definition of the communication signal to be detected. An Ethernet PHY device determines a valid link sequence after between 3 and 11 consecutive pulse are received***).

Regarding **claim 11** Bontemps et al. discloses a machine-readable storage having stored thereon, a computer program having at least one code section for providing and configuring secure communication links, the at least one code section being executable by a machine for causing the machine to perform steps comprising:

determining any one usable media pair from all existing media pairs of a first device;

selecting any one channel from all existing channels, said selected any one channel being different from a general channel assignment corresponding to said determined any one usable media pair; and

assigning said selected any one channel to said any one media pair(***see column 3, lines 58-62, A control circuit is provided that toggles the selected circuit between the first and second states until a link detect signal indicates the reception of communication signals. The control circuit holds the select circuit in the particular state in which valid communication signals were detected***).

Regarding **Claim 12**, Bontemps et al. discloses everything as claimed above (see claim 11). In addition, the machine-readable storage includes:

further comprising code for notifying a second device of said assigned any one channel which corresponds to said any one media pair(***see column 4, lines 5-6, a physical layer device within an external data device such as a DTE device(second device), continually transmit communication signals***).

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1 Regarding **Claim 13**, Bontemps et al. discloses everything as claimed above (see claim 12). In addition, the machine-readable storage includes:

further comprising code for cross-connecting a corresponding channel and media pair for said second device, said cross-connected channel and media pair being equivalent to said selected any one channel assigned to said any one media pair(**see column 4, lines 7-11, the DTE (second device) device may include an internal crossover connection, or a crossover cable may be used for the communication link, so that the transmitted signals may be transmitted to either the first or second contacts sets of the port connector**) .

Regarding **Claim 14**, Bontemps et al. discloses everything as claimed above (see claim 11). In addition, the machine-readable storage includes:

further comprising code for negotiating said assignment of said selected any one channel to said any one media pair(**see column 4, lines 14-18, the toggle function of a media detection system according to the present invention periodically and continuously toggles the receive inputs of the local physical layer device between the contacts sets of the connector so that the communication signals are eventually detected**).

Regarding **Claim 15**, Bontemps et al. discloses everything as claimed above (see claim 11). In addition, the machine-readable storage includes:

further comprising code for selecting from a plurality of predetermined channel and media pair assignments, a particular one of said channel and media pair assignment(**see column 3, lines 58-63, the control circuit is provided that toggles the select circuit between the first and second states until a link detect signal indicates reception of communication signals. The control circuit holds the select circuit in the particular state in which valid communication signals were detected**).

Regarding **Claim 16**, Bontemps et al. discloses everything as claimed above (see claim 11). In addition, the machine-readable storage includes:

further comprising:

code for designating a first combination of said channel assigned to said any one media pair as a communication channel and media pair; and

code for designating a second combination of said channel assigned to said any one media pair as a control channel and media pair(**see column 4, lines 62-65, the physical layer device to the appropriate contacts of the ports connector for performing a straight-through connection in one state (first combination) and a crossover connection in another state(second combination)**)).

Regarding **Claim 17** Bontemps et al. discloses everything as claimed above (see claim 16). In addition, the machine-readable storage includes:

further comprising code for securely transferring communication traffic via said communication channel and media pair **(see column 4, lines 5-7, the physical layer device within a external data device such as a DTE device, continually transmits communication signals, such as link or data pulses)**.

Regarding **Claim 18**, Bontemps et al. discloses everything as claimed above (see claim 17). In addition, the machine-readable storage includes:

further comprising code for securely transferring control information via at least one of said communication channel and media pair **(see column 4, lines 5-7, the physical layer device within a external data device such as a DTE device, continually transmits communication signals, such as link or data pulses)**.

Regarding **Claim 19**, Bontemps et al. discloses everything as claimed above (see claim 18). In addition, the machine-readable storage includes:

further comprising:

code for monitoring at least one of said communication channel and media pair by a second device; and

code for determining said selected any one channel assigned to said any one media pair **(see column 5, lines 31-36, physical layer device (second device), monitoring for communication signals in each of the first and second states of the select logic until valid communication signals are detected, and holding the select logic in one of the first and second states in which a link detect signal indicates detection of valid communication signals)**.

Regarding **Claim 20**, Bontemps et al. discloses everything as claimed above (see claim 19). In addition, the machine-readable storage includes:

wherein said control information is at least one of authentication information, encryption information, channel setup information and link provisioning and link maintenance information **(see column 4, lines 21-34, the frequency of the toggling function depends upon the particular protocol and the definition of the communication signal to be detected. An Ethernet PHY device determines a valid link sequence after between 3 and 11 consecutive pulse are received)**.

With respect to claims 21-30, it is noted that the language used by Applicant merely suggests or makes optional those features described as "adapted to"; such language does not require steps to be performed nor limits the claim to a particular structure. In re Hutchison, 69 USPQ 138. See MPEP 2111.04.

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Regarding **claim 21** bontemps et al. discloses a system for providing and configuring secure communication links, the system comprising:

at least one controller adapted to determine any one usable media pair from all existing media pairs of a first device;

at least one selector adapted to select any one channel from all existing channels, said selected any one channel being different from a general channel assignment corresponding to said determined any one usable media pair; and

said at least one controller adapted to assign said selected any one channel to said any one media pair **(see Figure 3, port circuit, see column 12, lines 34-46, see column 3, lines 58-62, A control circuit is provided that toggles the selected circuit between the first and second states until a link detect signal indicates the reception of communication signals. The control circuit holds the select circuit in the particular state in which valid communication signals were detected).**

Regarding **Claim 22**, Bontemps et al. discloses everything as claimed above (see claim 21). In addition, the system includes:

wherein said at least one controller is adapted to notify a second device of said assigned any one channel which corresponds to said any one media pair **(see Figure 2, element 218, PHY device, see column 4, lines 5-6, a physical layer device within an external data device such as a DTE device(second device), continually transmit communication signals).**

Regarding **Claim 23**, Bontemps et al. discloses everything as claimed above (see claim 22). In addition, the system includes:

wherein said at least one selector is adapted to cross-connect a corresponding channel and media pair for said second device, said cross-connected channel and media pair being equivalent to said selected any one channel assigned to said any one media pair **(see Figure 2, element 218, PHY device, see column 4, lines 7-11, the DTE (second device) device may include an internal crossover connection, or a crossover cable may be used for the communication link, so that the transmitted signals may be transmitted to either the first or second contacts sets of the port connector).**

Regarding **Claim 24**, Bontemps et al. discloses everything as claimed above (see claim 21). In addition, the system includes:

wherein said at least one controller is adapted to negotiate said assignment of said selected any one channel to said any one media pair **(see Figure 2, element 214, select logic, see column 4, lines 14-18, the toggle function of a media detection system according to the present invention periodically and continuously toggles the receive inputs of the local physical layer device between the contacts sets of the connector so that the communication signals are eventually detected).**

Regarding **Claim 25**, Bontemps et al. discloses everything as claimed above (see claim 21). In addition, the system includes:

wherein said at least one selector is adapted to select from a plurality of predetermined channel and media pair assignments, a particular one of said channel and media pair assignment (**see Figure 2, element 214, select logic, see column 3, lines 58-63, the control circuit is provided that toggles the select circuit between the first and second states until a link detect signal indicates reception of communication signals. The control circuit holds the select circuit in the particular state in which valid communication signals were detected**).

Regarding **Claim 26**, Bontemps et al. discloses everything as claimed above (see claim 21). In addition, the system includes:

wherein said at least one selector is adapted to:

designate a first combination of said channel assigned to said any one media pair as a communication channel and media pair; and

designate a second combination of said channel assigned to said any one media pair as a control channel and media pair(**see Figure 2, element 218, PHY device, see column 4, lines 62-65, the physical layer device to the appropriate contacts of the ports connector for performing a straight-through connection in one state (first combination) and a crossover connection in another state(second combination)**).

Regarding **Claim 27**, Bontemps et al. discloses everything as claimed above (see claim 26). In addition, the system includes:

wherein said at least one controller is adapted to transfer communication traffic via said communication channel and media pair(**see Figure 2, element 218, PHY device, see column 4, lines 5-7, the physical layer device within a external data device such as a DTE device, continually transmits communication signals, such as link or data pulses**).

Regarding **Claim 28**, Bontemps et al. discloses everything as claimed above (see claim 27). In addition, the system includes:

wherein said at least one controller is adapted to transfer control information via at least one of said communication channel and media pair(**see Figure 2, element 218, PHY device, see column 4, lines 5-7, the physical layer device within a external data device such as a DTE device, continually transmits communication signals, such as link or data pulses**).

Regarding **Claim 29**, Bontemps et al. discloses everything as claimed above (see claim 28). In addition, the system includes:

wherein at least one controller associated with a second device is adapted to:

monitor at least one of said communication channel and media pair by a second device; and

determine said selected any one channel assigned to said any one media pair(**see Figure 2, element 218, PHY device, see column 5, lines 31-36, physical layer device (second device), monitoring for communication signals in each of the first and second states of the select logic until valid communication signals are detected, and holding the select logic in one of the first and second states in which a link detect signal indicates detection of valid communication signals**).

Regarding **Claim 30**, Bontemps et al. discloses everything as claimed above (see claim 29). In addition, the system includes:
wherein said control information is at least one of authentication information, encryption information, channel setup information and link provisioning and link maintenance information(**see Figure 2, element 222 and 224, mode control circuit and clock circuit, see column 4, lines 21-34, the frequency of the toggling function depends upon the particular protocol and the definition of the communication signal to be detected. An Ethernet PHY device determines a valid link sequence after between 3 and 11 consecutive pulse are received**).

Response to Arguments

4. Applicant's arguments filed April 26, 2007 have been fully considered but they are not persuasive.

5. Applicant argues that Bontemps does not disclose or suggest the limitation "determining any one usable media pair from all existing pairs"(see page 20, last paragraph on page).

6. In response, the Examiner respectfully disagrees and draws attention to the fact that Bontemps teaches that the control circuit determines which media pair (**see column 3, lines 58-62, A control circuit is provided that toggles (determines) the**

selected circuit between the first and second states (media pairs) until a link detect signal indicates the reception of communication signals (from all existing media pairs). The control circuit holds the select circuit in the particular state in which valid communication signals were detected (determination of the one usable media pair)) See Figure 2, the control circuit decides which usable media pair is selected from the plurality of ports as shown.

7. In response to the argument that the each PHY device 218 in Fig. 2 of Bontemps is connected to one RX/TX pair, it is noted that the PHY 218 device has more than one port (PORT1-N) and the media pairs are shown in the figure.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mon Cheri S. Davenport whose telephone number is

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571-270-1803. The examiner can normally be reached on Monday - Friday 8:00 a.m. - 5:00 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MD/md
May 25, 2007

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